A Corporate Publication of Santee Cooper

POWERsource

Summer **2012**

From the CEO

Since our founding in 1934, Santee Cooper's mission has included a significant focus on stimulating economic development throughout South Carolina. Part of our commitment to keeping electric rates low is so that those rates will help attract and retain industry and jobs to our state.

In continuing our leadership role in these areas, Santee Cooper has taken a number of steps recently that complement important work that others in our state are doing to create jobs, grow industry and foster stronger supporting relationships.

In February, we joined officials with the state's electric cooperatives and announced a new, lower electric rate designed specifically to attract significant capital investment and jobs to the state. By partnering with the cooperatives, we can offer this rate to industry that could relocate in any of the state's 46 counties, making this a far-reaching and important opportunity. The economic development rate offers significant discounts to qualifying industry over the first four years of operation. In return, companies must commit to an eight-year presence and meet certain workforce and capital investment requirements.

Just last month, Santee Cooper's board of directors approved another major initiative: the Economic Development Revolving Loan Program, which creates a pool of $25 million that can be loaned to draw industries to the three counties we serve directly, Berkeley, Georgetown and Horry, as well as our municipal customers.

The Revolving Loan Program offers loans to local governments and nonprofit economic development organizations of $500,000 to $5 million and can be used for land acquisition, infrastructure improvements or buildings.

Throughout our history, Santee Cooper has been a leader in initiatives that attracted and retained major industries, names that include Nucor, Showa Denko and Google. We have helped develop office and industrial parks, and we've partnered with the state's electric cooperatives to maximize our efforts. I already mentioned the industrial development rate announced earlier this year; we also worked with the cooperatives to create the South Carolina Power Team in 1988, which has been involved in more than 575 new industrial locations and expansions since then, representing $8.9 billion in capital investment and more than 50,000 new jobs.

Why? Industry creates high-paying jobs for our neighbors, and South Carolina's industries are generous participants in community needs. They elevate our entire state by being here.

Santee Cooper remains committed to growing our state's economy with these new and innovative programs and initiatives, for the betterment of each of you.

Lonnie N. Carter
President and Chief Executive Officer

santee cooper®

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feature

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About the cover: Summer is the season for fun in the sun spent on the sandy beaches of the Grand Strand and the Santee Cooper Lakes.

FREEWOODS FARM:

LEGACY OF HOPE, RESILIENCE AND DETERMINATION

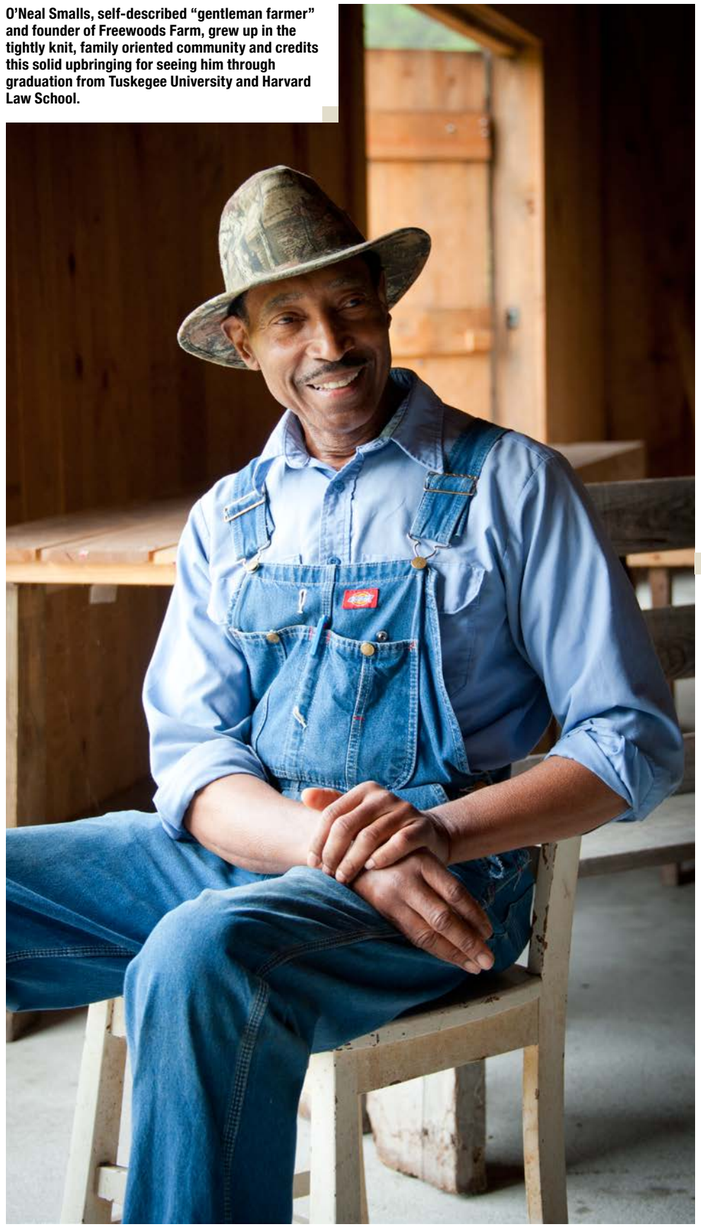
By Willard Strong Photography by Jim Huff

On a rainy and unseasonably cool morning this past June, O'Neal Smalls sat in a chair overlooking the 40 acres that comprise Freewoods Farm, a unique piece of land in southern Horry County.

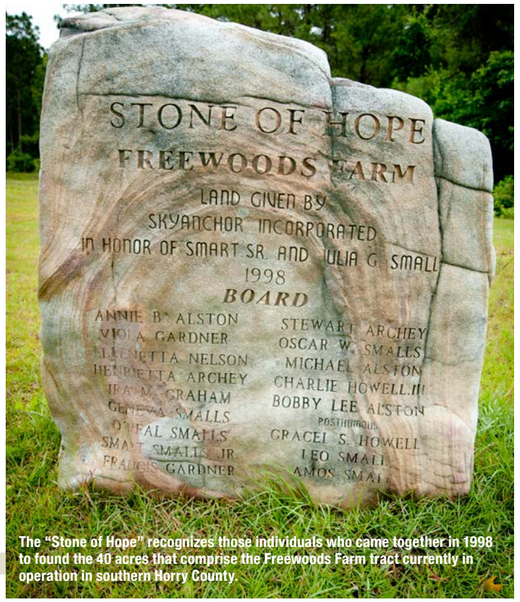
He was waiting patiently as the steady rain poured. A group of 24 middle school students and six counselors, part of a two-week summer camp run by S.C. State University, were scheduled to arrive at any moment. Smalls wondered aloud if the rain, heavy at times, had deterred the campers and pondered the possibility that they would not be visiting today.

He was so looking forward to imparting his unique knowledge and experiences of Freewoods, part of the Burgess community between Socastee and Murrells Inlet.

"This younger generation and older folks too, don't know the story of Freewoods, and they should," he says. A short while later, the sound of a diesel engine is heard and a large bus traveling from Orangeburg pulls alongside what is called the Farmers Market building. Built to resemble a tobacco market in nearby Conway, it is the focal point of visiting this historical landmark.



O'Neal Smalls, self-described "gentleman farmer" and founder of Freewoods Farm, grew up in the tightly knit, family oriented community and credits this solid upbringing for seeing him through graduation from Tuskegee University and Harvard Law School.



The "Stone of Hope" recognizes those individuals who came together in 1998 to found the 40 acres that comprise the Freewoods Farm tract currently in operation in southern Horry County.

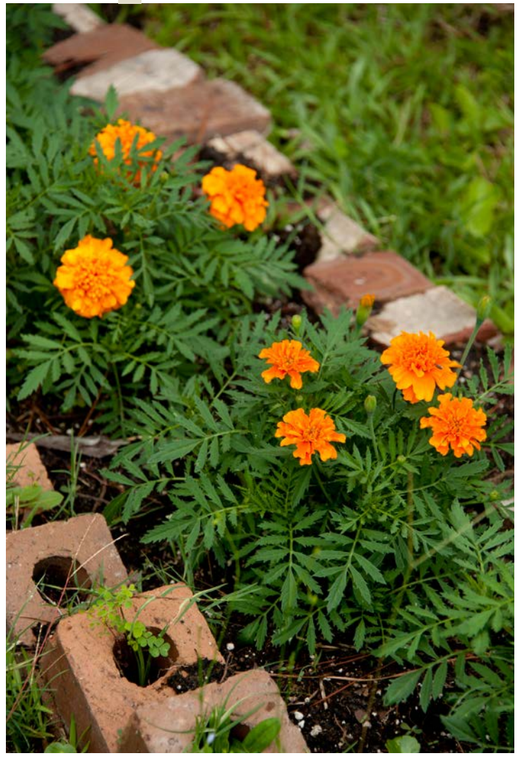
After the students disembark and settle in chairs, Smalls rises to speak. An unassuming man that belies his remarkable life story, he begins the tale he so loves to tell, to young and old alike.

"Let me welcome you to Freewoods Farm," he says. "We focus on African-American history, that period after the Civil War, which ended in 1865, after the slaves were freed. For the first 100 years after the war, farming was the primary occupation of black people. This is farming with mules and plows and rakes, like our forebears lived." Unlike the common post-Reconstruction scenario in South Carolina and throughout the South, Freewoods was not a sharecropping community.

Smalls says, "I have no doubt that you have farming in your background, whether it is your father, grandfather or great-grandfather." He explains that following the end of the Civil War in 1865, 4 million African-Americans in the South's slave-holding states had been set free. But what then?

Left: Smalls leads a group of day campers on a tour that included the farmhouse in the background.

Right: These antique farm implements show the difficulty of farming without motorized horsepower.



"They were freed after almost two-and-a-half centuries of slavery," says Smalls. "Freed, with no land, no money, no credit, no formal education, no established relatives to shelter them for a while, and freed in a hostile environment."

To say that this was a time of unparalleled change and upheaval in the South is an understatement. South Carolina was in ruins. A large part of its white male population had died or had been wounded fighting for the Confederacy. Its antebellum agricultural economy, built on the backs of an enslaved people that made cotton king, and before it indigo and rice, was over. It is against this backdrop that Freewoods Farm came to be.

"Freewoods Farm essentially became a black farming community for the first century after freedom," Smalls says. "Our mission is to tell the story of what farmers did during that time period."

Freewoods community is formed

After the Civil War, Small says, three white landowners from Georgetown County who were sympathetic to the plight of the newly emancipated made the Freewoods land available. The first Freewoods settlers came from Georgetown-area plantations to settle just across the Horry County line.

There were no plantations in the Freewoods area and the land, low and savanna-like, was deemed unsuitable for large-scale agricultural production. In short, while there was some high ground near the east bank of the Waccamaw River, this was property no one else really wanted.

Left: Campers are captivated by the livestock that still provide food and a steady source of income for the community.

Top right and center: The appealing table fare of fresh eggs and meat was a popular source of nutrition at Freewoods Farm.

Bottom: Cooking utensils, an indispensable part of three meals a day at Freewoods Farm, are on display in the old farmhouse.

"Today it's called 'wetlands,'" Smalls says. "It was a major challenge to figure out how to be successful. But this generation, who I call the 'first generation' did, and laid the basis of what Freewoods became."

Says Smalls, "They tried growing rice and paid back the price of the property with rice. Then cotton became the cash crop and after that, tobacco. In addition, there was corn grown for farm animals and they also grew sweet potatoes, tomatoes, collard greens, turnips and other crops for their use."

Smalls' father was part of the "third generation." Some members of that generation served in World War I and were part of the evolution of the Freewoods area that saw it expand and develop into a true community.

Freewoods and the larger Burgess community became a place unto itself, essentially self-sufficient. The occasional trip to Conway or Georgetown would have been a special occasion to sell crops or livestock, do banking business or purchase items they didn't produce themselves.

"Not only did they make the fields flourish," says Smalls, "they built churches and schools and organized associations and the like. Every three months, all the various churches would hold events and would rotate from church to church, preaching and teaching the gospel."

Rosenwald philanthropy influenced community

"For me, it's a matter of duty to tell this story," Smalls says. He was born at Freewoods in 1941, in a family of 10. There were six girls and four boys, he next to the youngest.

Green beans, potatoes, squash and cucumbers represent some of the vegetables grown and sold at Freewoods Farm.

He attended the St. James Rosenwald School in Burgess, a school constructed by Smalls' neighbors with assistance from the Julius Rosenwald Fund.

Rosenwald (1862-1932) was a noted philanthropist, manufacturer and businessman who was a part owner and executive of Sears, Roebuck & Co. He established the Rosenwald Fund that donated millions of dollars in matching funds to support the education of black children in the rural South. He also founded the Museum of Science and Industry in Chicago, donating approximately $5 million to that endeavor in the early 1920s.

This woodstove, located in the old farmhouse, shows how a typical Freewoods Farm resident cooked food prior to the arrival of electricity in the 1940s to this section of Horry County. The farm is served by Horry Electric Cooperative, which has Santee Cooper as its source of power.

"The story is that a white lady came to the community and said there was some money available to build a school," Smalls says. "It was Julius Rosenwald money. Those farmers embraced this concept and land was acquired. One-third of the school's cost was raised by the community. It was first grade through eighth grade."

It was at Rosenwald School that Smalls got his initial formal education. Upon entering the ninth grade, he attended Whittemore High School, a segregated school some distance away in Conway. Segregation in public schools would not completely end in South Carolina until the fall of 1970.

Smalls has made the most of his educational opportunities, and credits the education he got at Rosenwald and at Whittemore as a good one, with dedicated teachers. He went on to attend and graduate from Tuskegee University in Alabama. From there, it was Harvard Law School, and then to the Georgetown University Law School for a graduate degree. He also served in the U.S. Army in Vietnam.

Above all, Smalls is a teacher and taught at the university level for 35 years. Whether it is a group of middle school students or teaching law at American University, George Washington University or the University of South Carolina School of Law, he is passionate about telling the little known story of Freewoods against the backdrop of emancipation, Reconstruction, desegregation and securing the right to vote. He retired from USC in 1999.

This provided him the opportunity to found and form Freewoods Farm with its mission of education. A non-profit organization, Freewoods Farm is surrounded by that most-common of late 20th century and early 21st century realities: suburban sprawl. New subdivisions, strip malls and fast-food restaurants ring its property, bringing new residents and a much different way of life to the once-isolated Burgess community.

"We have two full-time employees and I am a volunteer," says the ever-modest Smalls. "We grow vegetables and a lot of sugar cane, and we sell our crops to the public. People don't eat enough vegetables."

Every Tuesday and Saturday during the growing season fresh vegetables can be found for sale, including butterbeans, honeydews, peas, corn, watermelon and cantaloupe.

Last year, Smalls published a book about Freewoods. Research began in 1986. It's called "Blessed Be the Ties That Bind, Freewoods Community in the 1950s," published by Vantage Press. Smalls interviewed the older residents of Freewoods, many of whom are now deceased, and even included exerpts from sermons preached in the community's churches.

Top: This colorful patchwork quilt located in the farmhouse bedroom is representative of the design that provided both warmth and style.

Bottom: A camper primes the pump to draw water from the Freewoods Farm well.

He had trouble settling on a suitable publisher. "They wanted me to 'wave the bloody shirt,'" he says. "They wanted me to spend a lot of time on the Ku Klux Klan and the trouble from that period. I don't leave it out and there was plenty to address, but I didn't want that to be the overriding theme of the book."

Freewoods Farm is a magical place. It harkens back to a simpler time when people lived without running water and electric lights. It is testament to basic tenets Americans admire: hard work, self-determination and the right to own your own land. As Smalls writes in his book, "All the days of my boyhood through high school were lived in that community. Come with me, come with me! I want to show you our community."

Freewoods Farm is located at 9515 Freewoods Road, Myrtle Beach, SC 29588. There is a suggested donation of $5 for adults, children 12 and under $3. Group tours can be scheduled. You should call before you visit. Their telephone number is 843-650-2064 or 843-650-9139. For more information go to www.freewoodsfarm.com. PS

IN SEARCH OF THE ALMIGHTY ADRENALIN RUSH

IT STARTS WHEN YOU FEEL YOUR HEART POUNDING.

YOUR PALMS BEGIN TO SWEAT AND YOU FEEL A LITTLE WEAK IN THE KNEES.

YOUR FACE IS FLUSHED, YOUR STOMACH NERVOUS AND YOU'RE LIGHTHEADED.

IT'S A FEELING OF MOMENTARY FEAR MIXED WITH GIDDY EXCITEMENT, TERROR COMINGLED WITH PLEASURE, LAUGHTER PUNCTUATED WITH REPEATED SCREAMS.

IT'S THE MOMENT THRILL SEEKERS TRY TO EXPERIENCE AS OFTEN AS THEY CAN —

BY NICOLE A. AIELLO

PHOTOGRAPHY BY JIM HUFF

THE GRAND STRAND NOW BOASTS MORE HIGH-FLYING, HEAD-RUSHING, PALM-SWEATING ACTIVITIES THAN EVER BEFORE. THE MYRTLE BEACH AREA HAS GONE EXTREME, AND VISITORS AND LOCALS ALIKE ARE EMBRACING THE QUEST FOR THESE HEART-POUNDING ADVENTURES.

At the Myrtle Beach Speedway's NASCAR Racing Experience, customers can drive authentic NASCAR stock cars at speeds of more than 100 mph.

Start Your Engines

There's nothing quite like the feel of rubber hitting the road, and when you get to do it going 100 mph in an authentic NASCAR stock car, it's even better. The Myrtle Beach Speedway, which has been a staple of the Myrtle Beach community since 1958 and the training grounds for some of NASCAR's biggest stars, recently opened its newest adrenalin-charged adventure – the NASCAR Racing Experience.

Jim Waggoner, a Myrtle Beach vacationer, came ready to put the pedal to the metal one recent afternoon after his three children surprised him with a five-minute race on the half-mile oval for his 60th birthday.

"I've always raced, but only on dirt tracks. Racing is exciting, but racing on asphalt is something new for me," Waggoner said.

When he finished his race and shimmied out of the Jeff Gordon 24 car, Waggoner gave the thumbs up and said it was great, but his ear-to-ear smile said more than any of his words could.

Although Waggoner had some racing experience under his belt, it's not necessary to have experience to participate. Women should not write the experience off as a male-only activity, either. As a matter of fact, most women who participate drive faster than the men.

"Typically females run the fastest times because they're usually a little more nervous. They pay more attention to what their crew chief is explaining to them," said Bob Lutz, owner of the Myrtle Beach Speedway. Lutz has also been involved with the NASCAR Racing Experience around the country since 1990.

"Most men say they know what they're doing, that they can turn left and step on the gas, but it's not that simple," Lutz explains, "When the engine starts up, it can quickly humble you to hear and feel that intense rumbling. It's intimidating and it's completely different than what most people think. But it's a thrill for anyone."

And a thrill – especially at over 100 mph – is just what adrenaline junkies crave.

Blowin' in the Wind

Being in control behind the wheel is one thing, but being at the mercy of Mother Nature takes more than daring. It takes skill. Kiteboarding has reached new popularity along the Grand Strand, thanks in part to the fact that locals and visitors can try it out on their own with some lessons and a lot of coaching.

Joey Roper has a lot of academic knowledge of the sport, although he's a relative novice at the kiteboarding experience himself. Roper, who is a manager at Sail & Ski Connection, said the excitement of getting strapped to a kite is enough to get him ready for another go at it.

"I've had lessons, but am still a student, so to speak," said Roper. "I'm excited about this summer, about getting up and doing it by myself. Once you're up, you

Jim Waggoner, who reached a high speed of 100.8 mph, slides out of the car after his five-minvute race. The Myrtle Beach Speedway's track record is 109 mph.

The Myrtle Beach Speedway's half- mile semi-banked oval can be seen in its entirety from the grandstands, allowing an unimpeded view of the adrenalin-charged action around the track.

Photo by Tom Galmarini

are ultimately in control. Once you're out on the water, even though you have someone beside you, it's all you."

Roper said kiteboarding has taken off, especially among tourists who, while on the beach, see kiteboarders riding the wind and the waves and want to do it themselves.

"It's an adrenalin-powered sport. It's pure adrenalin," Roper said.

Some may even say it's the answer to the quest for the almighty adrenalin rush.

Free Falling

On first glance, Nick Tyson doesn't look like the type of guy to be afraid of much of anything. He's in his early 20s, tall, muscular and has a certain confidence in his demeanor. However, looks can be deceiving and stepping off of a 60-foot platform attached only to a zipline can get almost anyone's adrenalin surging.

"YOU CAN'T THINK ABOUT IT OR YOU'LL PSYCH YOURSELF OUT. YOU JUST HAVE TO JUMP."

"The most nerve-wracking part was on the ground when they were putting the harness on me," Tyson said. "My heart started beating really fast and loud, and I got really nervous just thinking about what I was going to do."

After Tyson was strapped into his harness, he had a 60-foot tower to climb, all the while thinking about what he was about to do. After being clipped in and secured, he took a deep breath and pushed off of the platform to ride the 600-foot zipline cable to its end.

Top: Along with a sense of adventure, soaring along cables crisscrossing the skies requires safety gear, including helmets and harnesses.

Bottom: A customer at Adrenaline Adventures in Myrtle Beach plummets to the ground from the 60-foot free fall tower while attached to a parachute simulator cable.

TO THE EXTREME

The Grand Strand has a large number of venues offering extreme activities to get the heart pounding. Many include lessons and rookies are welcome. More information can be found at www.visitmyrtlebeach.com.

- **Ziplining**
- **Free falling**
- **Race car driving**
- **Stand up paddleboarding** (surf, inlet or waterway)
- **Ocean surfing**
- **Parasailing**
- **Jet skiing** (ocean or waterway)
- **Deep sea fishing**
- **Helicopter rides**
- **Scuba lessons**
- **Snorkeling**
- **Sky diving**
- **Horseback riding** (trails or beach)
- **Windsurfing**
- **Wakeboarding**
- **Knee boarding**
- **Waterskiing**

Tell us about your extreme adventures along the Grand Strand at www.facebook.com/santeecooper.

Just when he thought he couldn't get much more adrenalin coursing through his body, it was time to climb another tower, put his toes on the edge of a ledge and "free fall" jump. Tyson was holding his breath as he stepped off this second platform and fell to the ground, connected to a cable that simulated a parachute experience.

"You can't think about it or you'll psych yourself out. You just have to jump," he said. "It was awesome!"

And when you don't jump, you can ask to be pushed. Mike Cost, an employee at Myrtle Beach Zipline Adventures, where Tyson and his friend Adrian Gonzalez took to the skies, said he's had customers ask him to give them a shove because they were too afraid to take the plunge on their own.

"You don't realize how high it is until you get up there and have to actually step off the platform," Cost said. "We've had people take up to 45 minutes to get up the nerve."

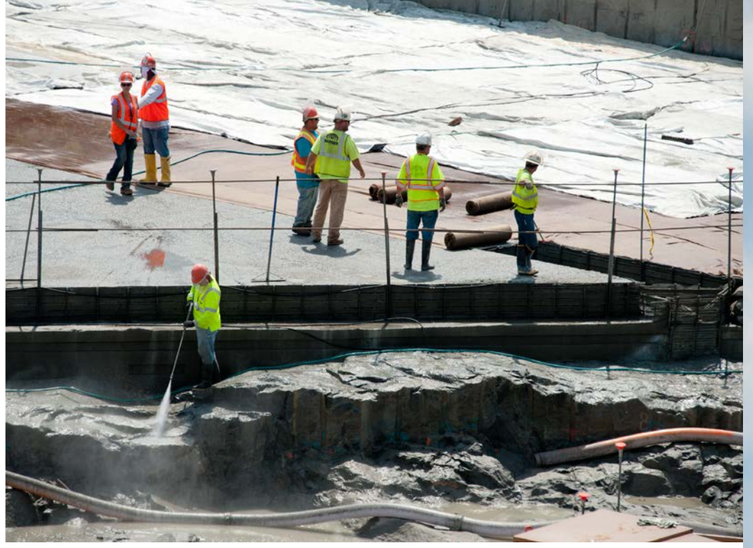
Whether 5 or 95, almost anyone can zipline as long as they weigh at least 40 pounds. "What matters most isn't age or weight," Cost said. "It's having the guts to take that leap of faith." PS

Although the views of the ocean and the Myrtle Beach Boardwalk are breathtaking, stepping off a 60-foot platform to zipline 600 feet from tower to tower really takes your breath away.

Next-Generation Nuclear:

V.C. Summer Rollout Underway

The containment vessel, when finished, will measure 130 feet in diameter and stand 215 feet tall. It will house the nuclear reactor and other key components. Shown here is the vessel's bottom head for Unit 2.



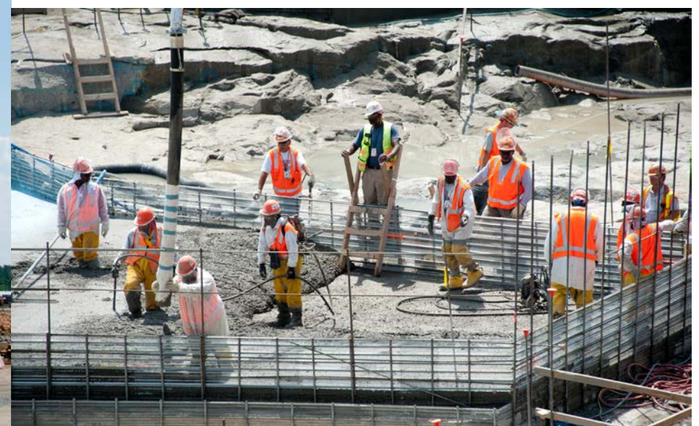
Right: Workers prep the site for foundation construction of Unit 2's turbine building.

History is being made near the shores of Lake Monticello, as one of the country's first new nuclear power projects in 35 years begins its six-year construction journey toward completion. At the finish line: the impressive task of powering South Carolina into its future.

Emerging in the wake of a seemingly stagnant nuclear power industry, units 2 and 3 at V.C. Summer Nuclear Station received Nuclear Regulatory Commission construction and operating licenses (COLs) March 30. They followed NRC licensing of a similar expansion project at Southern Co.'s Plant Vogtle by only a few weeks, and these two projects put the Southeastern United States as central in a defining chapter of our nation's energy story.

A wider view of the Unit 2 footprint, with the turbine area shown in the top photograph visible in the center foreground.

Components arrive by rail at the V.C. Summer contruction site. Here, a crane works to unload part of the heavy lift derrick, which is the world's largest crane and is shown on pages 20 and 22.



Santee Cooper and South Carolina Electric & Gas Co. are expanding V.C. Summer as an extension of their joint ownership of Summer Unit 1, which began operating in 1983. Prior to its licensing of the Southern project, the NRC had not licensed a new nuclear power project in more than three decades. The

Left: These workers are installing fill concrete in preparation for foundation construction at Unit 2's nuclear island.

A broader view of the concrete prep work ongoing at Unit 2, with the heavy lift derrick (HLD) in the background. The blue HLD can lift 4,000 tons and features a main boom that is 560 feet long. On a clear day, the HLD is visible from downtown Columbia – more than 20 miles away.

Summer and Vogtle projects are significant for a couple of reasons beyond that: they are the first to test the NRC's new streamlined licensing process, which culminated earlier this year with receipt of the COLs, and they are the first to utilize the newest generation of nuclear power technology, featuring modular units and state-of-the-art safety features.

"This is a significant milestone for V.C. Summer, for Santee Cooper, and for our state," said Santee Cooper President and CEO Lonnie Carter. "These new nuclear units are a critical component of Santee Cooper's long-term plan to diversify our generation mix and continue to provide our customers with low-cost, reliable and environmentally protective electricity. They will be key to job creation and economic development opportunities as we continue rebuilding our state's economy and position South Carolina for the future."

SCE&G is majority owner in the two new units, with 55 percent ownership. Santee

Right: An "insider's view" of circulating water pipes. These pipes are 10 feet in diameter and part of Unit 2's cooling system.

This angle better shows the excavation depth and detail for Unit 2, with the rail cargo unloading in the background.

Cooper owns 45 percent of the project. The utilities have chosen Westinghouse AP1000 pressurized-water reactors each with a capacity of 1,117 megawatts. The first unit is expected to come online in 2017 and the second, in 2018.

"We are only a couple months into the COL permitted construction activities so that work is just getting underway," said Michael Crosby, Santee Cooper's vice president for nuclear operations and construction. "The Summer and Vogtle projects are the first domestic Westinghouse AP1000 units to be built. As with the addition of any new base load generation, we anticipate a few challenges along the way—it goes with the territory on any engineering project of this magnitude and duration. We are fortunate to be in a position to apply lessons learned from the AP1000 units currently under construction in China. We are also fortunate to be expanding on a very strong partnership with SCE&G. I am confident the partnership, along with our contractors, will be successful on this project."

Already the Summer expansion's economic impact is tilting positive, with more than 1,300 workers on the construction site. At the peak of construction, employment will reach about 3,000 in number. When the units are built and operating, they will provide approximately 800 permanent jobs. Beyond that, they will serve as key tools at hand for state leaders working to attract new industry that needs reliable, affordable power for the long term.

Nuclear power remains the only base load source of electricity that is emissions free, which is why it is a central part of Santee Cooper's long-term plans to diversify generation and position itself to best meet existing and anticipated regulations affecting more traditional, fossil-fueled generation.

Additionally, nuclear power plants are relatively inexpensive to operate. And SCE&G, as operating partner of V.C. Summer Unit 1, has achieved a stellar safety record in operating that station. The AP1000 units offer the latest in safety features, too, with passive measures that automatically activate to efficiently shut down the units in an emergency, without requiring AC power to complete the action. As a footnote, Summer is located in Fairfield County, approximately 120 miles inland and 400 feet above sea level, which means a disaster like the tsunami that crippled nuclear units in Japan last year is not possible at Summer.

"As we looked ahead in planning to continue meeting South Carolina's energy needs, we examined all the practical alternatives for what to build next. When we considered reliability, environmental benefits and long-term operating costs, the clear choice was nuclear," Carter said. PS

The switchyard that will serve units 2 and 3 is 85 percent complete and should be finished by the second quarter of 2013. It will have nine 230-kilovolt lines carrying electricity to SCE&G and Santee Cooper transmission networks.

Circuit breakers are designed to endure repeated electrical arcing, which can wear on equipment and hinder a breaker's ability to carry a current. Here, a contact resistance tester tests a circuit breaker to determine if maintenance is needed.

Substation MAINTENANCE

By Kevin F. Langston Photography by Jim Huff

Santee Cooper's power delivery system consists of over 7,700 miles of high-voltage transmission and low-voltage distribution lines that carry electricity from the generating stations to customers or other delivery points. Scattered throughout the system are over 150 substations that are in place to perform a variety of functions, from raising or lowering voltages to re-routing the flow of electricity.

Above: Contract employee Alex Creech uses a hot stick to ground a 230 kV power circuit breaker (PCB) to make it safe for technicians to conduct tests on the equipment at a Kingstree substation. Hot sticks are insulated poles that protect workers from electric shock. Assisting Creech from the bucket truck is Jack Lowe, technician A, while Eric Simmons, technical supervisor, supports the ladder and Cherel Terrell, technician A, looks on.

Top Right: Rob Talbert, technician A, dons his safety gear before being lifted in the bucket truck to help ground a 230 kV PCB. "Every day, we're dealing with equipment and materials that can be hazardous," Simmons says. "Safety is something we take very, very seriously."

Bottom Right: Thomas Agema, technician A, checks equipment printouts to see where to connect a timing tester, which will measure a circuit breaker's mechanical operations to verify its integrity.

Substations are an integral component of Santee Cooper's power delivery system and play an important role in the utility's consistently high reliability numbers. Overseeing the maintenance of these substations is Jim Waddill, a 22-year veteran of Santee Cooper.

"Substation is kind of a generic term," he says. "It's really just a station that has a transformer in it, and it either steps the voltage up or down. There's also what's called a switching station, which doesn't have a transformer in it. The same voltage lines come in to that station to a common bus so that power will flow in on one line and out on another line. It's a way to control the flow of power on your system."

Waddill's path to becoming superintendent of substation maintenance wasn't exactly a straight one, but he says each step along the way has prepared him for his current job keeping Santee Cooper's substations running efficiently and effectively.

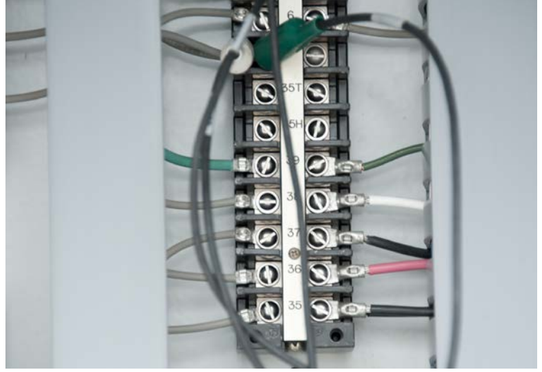
After studying electrical engineering at The Citadel, Waddill joined Santee Cooper in 1990 as a "one man group" called computer applications.

"I was a liaison between the IT and design-engineering groups," he says. "A lot of what IT does for the rest of the company I was doing for the design engineers: setting up computers, installing software, writing programs. I really enjoyed it, actually."

After four years, Waddill was moved to system protection and control, where he really started to learn about Santee Cooper's power delivery system.

"We have circuit breakers on our system that can interrupt the flow of electricity, and the relays are like the brains of the circuit breakers. They analyze the flow of electricity on those lines and can detect a problem in

Bottom, Left to Right: Cherel Terrell, technician A, prepares to test a PCB at Cross Generating Station; Rob Talbert, technician B, ensures the equipment is properly grounded; and Jack Lowe, technician A, connects the test leads.



Top Left: Will Beasley, general engineer, sets up a timing tester for a circuit breaker.

Top Right: Detail of a terminal block, which creates a bus bar for power distribution, in a PCB mechanism cabinet

Kevin Dupree, technician A, uses a hot stick to ground equipment before inspection and maintenance work can begin. Substation crews inspect and maintain more than 150 substations throughout South Carolina every year.

just a couple of cycles — we're talking milliseconds. If a relay detects a problem — say a tree limb comes into contact with a power line — it tells the breaker to trip, or open up. If that breaker doesn't trip, high currents could overload the system and cause significant damage and hazardous conditions."

Waddill spent about 13 years with system protection and control, five of them as its supervisor. He was named superintendent of substation maintenance in 2008.

"We generally work in the same areas as the system protection and control group, but it's different," he says. "For one, we have more safety concerns. Just about everything we do has the potential to hurt you. We have a lot of safety rules we follow. We have a lot of environmental regulations, too."

As part of the daily grind, substation maintenance teams work with transformer oil, battery acid, sulfur hexafluoride gas and other hazardous materials, which carry with them many environmental regulations governing their safe use, storage and disposal.

> We've got to be flexible enough to respond to situations as they come up.

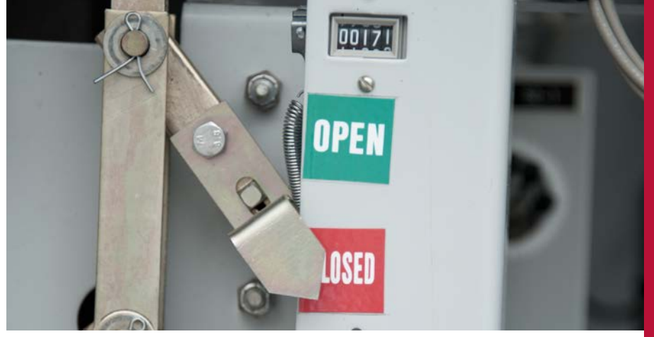
In accordance with the variety of functions they perform, substations

Left: Back at the Kingstree Substation, Will Smith, technical supervisor, observes the results from a contact resistance test.

Right: Detail of a disconnect switch that has been locked and tagged in accordance with a switching order that ensures the equipment has been de-energized prior to maintenance.

come in many shapes and sizes. Generally they contain circuit breakers, switching equipment, relay equipment, capacitor banks, battery banks and transformers.

"Most people have probably seen a substation but didn't know what they were looking at. It's that fenced-in, graveled area with all sorts of strange looking equipment," Waddill says. "Everything within and



Eric Simmons, Technical Supervisor, uses a hot stick to complete grounding at Cross Generating Station. With substation equipment installed throughout Santee Cooper's 5,000-mile transmission system, Substation Maintenance crews can spend a lot of hours on the road. "We've got some equipment right on the state line, which takes about 3 1/2 hours just to get there," Simmons says.

Detail of a PCB indication, which shows if the circuit is open or closed, located in a mechanism cabinet.

including that fence is our responsibility. We do the installation and maintenance of the circuit breakers, the transformers and the battery banks, just to name a few."

Waddill has a staff of 19 employees, including a stores specialist that oversees the substation maintenance warehouse. A pair of engineers helps Waddill with the prioritizing work that needs to be done and keeping track of work orders for preventative and corrective maintenance. There are two crews in the Moncks Corner area — each comprised of a technical supervisor, four technicians and a contract worker — that report to Waddill. There also is a satellite crew of two technicians and one contractor in the Blythewood area.

Beyond its normal duties, substation maintenance is also routinely asked to help with projects for Santee Cooper's generating stations, its industrial customers or the electric cooperatives served by its statewide transmission system.

"We have approximately 150 sites that we deal with either on a monthly or quarterly basis. It's a lot of ground to cover, and we get pulled in all kinds of directions," Waddill says. Keeping a power delivery system more than 70 years old in optimum condition can present its share of challenges.

"We've got some equipment out there that dates back to the earliest days of Santee Cooper. It's not a lot, but then there's everything in between out there as well," he says. "Every year, we have a chance to change out some of that older equipment, but then we'll get jobs from other areas as well. If there's a new substation being built, we'll obviously have a part in that. Then there are those projects you can't plan for.

"We've got to be flexible enough to respond to these situations as they come up," Waddill continued. "At the same time, we've got our minds on keeping costs down."

Waddill gives all credit to his department, crediting them for flexibility and innovation. "They have a very tough job, and they take a lot of pride in what they do." PS

COO McCall Retired June 30

On June 30, Executive Vice President and Chief Operating Officer Bill McCall retired after 41 years of service, a tenure marked by a tenfold increase in generating capacity that transformed Santee Cooper from a relatively small electric system into the state's largest power producer.

McCall will be remembered for his contributions building Santee Cooper's modern generating fleet, its expansive transmission and distribution network and two wholesale water systems, all of which have reliably and affordably served customers and been a catalyst for economic development.

McCall joined Santee Cooper in August 1971. At that time, Santee Cooper had 698 megawatts of generating capability. Today, Santee Cooper can generate approximately 5,900 MWs, and its transmission network has grown from 2,250 miles in 1971 to 4,990 miles today.

"Bill's impact on Santee Cooper, our customers and our state cannot easily be measured or summed up," noted President and CEO Lonnie Carter. "He has had a great career here, and we are all so much the better for it."

McCall is probably best known for building power plants. His first big project was the 285-MW Unit 2 at Winyah Generating Station, which came online in 1977 – one year after he was named vice president of Engineering and Construction. The project came in on time and on budget, a hallmark of McCall's management style. Unit 3 was completed in 1980 and Unit 4, the following year.

He continued to supervise station and system expansions after becoming vice president of Generation in 1983. McCall move to vice president of Horry-Georgetown Division in 1993, and returned to Moncks Corner in 1994 as executive vice president of Operations. Over the next 14 years, he was responsible for constructing Rainey Generating Station and Cross units 3 and 4. He was named chief operating officer in 1998.

Since 2008, McCall has worked with SCE&G to secure licenses to build two new nuclear units at V.C. Summer, positioning Santee Cooper at the forefront of the nation's return to new nuclear power construction after three decades of inactivity.

McCall has also been heavily involved in community organizations. Most recently, he completed a four-year stint as chairman of the Berkeley Chamber of Commerce, and he is a past chairman of the Charleston Regional Development Alliance. He's also served in numerous civic clubs.

"Santee Cooper is important and I've given them a big part of my life," he said. "I'll always be thankful for the opportunities I've had, working with some of the greatest people in the world. It's great to have been part of that."

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SANTEE COOPER NEWS

By Dominic Freeman

Santee Cooper earns APPA honor

Santee Cooper has earned Reliable Public Power Provider (RP3) recognition from the American Public Power Association for providing consumers with the highest degree of reliable and safe electric service.

The RP3 designation recognizes public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development and system improvement. Criteria within the categories are based on sound business practices and represent a utility-wide commitment to safe and reliable delivery of electricity.

"Santee Cooper's main priority focuses on delivering electricity safely and reliably. It is central to everything else we do as an electric utility," said Mike Poston, vice president of retail operations for Santee Cooper.

Carp battle hydrilla

Santee Cooper has stocked lakes Marion and Moultrie with 109,000 sterile Chinese grass carp, in a renewed strike against hydrilla.

Hydrilla is a non-native aquatic weed that is invasive and, if left uncontrolled, can cause significant problems on the lakes. The grass carp, which eat hydrilla, are the most effective and least intrusive means to control the weed.

This is the first significant grass carp stocking in the lakes in several years. After significant stockings annually from 1989 through 1996, Santee Cooper switched to "maintenance stocking" to maintain control of the hydrilla. However, the weed saw a 300 percent increase on the lakes from 2010 to 2011 and so the additional carp were added this year.

Interest grows in nuclear share

Santee Cooper signed two separate letters of intent earlier this year with utilities interested in exploring potential agreements involving Santee Cooper's share of the V.C. Summer Nuclear station expansion.

Santee Cooper and South Mississippi Electric Power Association announced this spring that a letter of intent had been jointly executed, which provides for negotiations for the development of a power purchase agreement wherein South Mississippi may potentially secure a minority interest in Santee Cooper's share of new units under construction at V.C. Summer Nuclear Station.

The letter of intent provides for the opportunity for South Mississippi Electric to secure 2-7 percent of the capacity and energy output from the generating station, which is roughly 4-14 percent of Santee Cooper's ownership interest in the two new units. This letter of intent also includes as part of the potential transaction an option for South Mississippi Electric's future acquisition of a portion of Santee Cooper's ownership interest.

Santee Cooper also has signed a letter of intent with American Municipal Power Inc., (AMP) to explore the possible purchase of a minority interest in Santee Cooper's share of the new units.
The letter of intent provides for negotiations through which AMP could possibly purchase from Santee Cooper approximately 2-5 percent of the nuclear units under construction, and allows AMP to perform additional analysis and due diligence.

Santee Cooper owns 45 percent of the V.C. Summer expansion, and SCE&G owns 55 percent. In 2010, Santee Cooper began evaluating its level of ownership percentage in the new nuclear facilities, a review that continues and has been disclosed with rating agencies and other key stakeholders. The NRC approved combined construction and operating licenses for the project on March 30.

Santee Cooper board approves bond sale

The Santee Cooper Board of Directors approved the sale of $574,990,000 in revenue obligation bonds in April.

The all-in true interest rate is 4.289 percent. The bonds mature from 2013 through 2043.

Specifically, the sale includes 2012 Tax-Exempt Series D notes totaling $312,160,000 and 2012 Taxable Series E notes totaling $262,839,000. Proceeds will be used primarily to finance Santee Cooper's share of construction costs for two new nuclear power units at V.C. Summer Nuclear Station.

The issue drew ratings of AA- from Fitch Ratings and Standard & Poor's, and an Aa3 from Moody's Investment Service.

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